

REMARKS/ARGUMENTS

Claims 20-45 were pending of which Claims 20-25, 29, 31-38, 42, and 44-45 were rejected and Claims 26-28, 30, 39-41, and 43 were objected to. Claims 24-26, 29, 37-39 and 42 are cancelled by this amendment. Claim 20, 23, 27, 28, 30, 33, 36, 40, 41, and 43, are amended.

The Examiner objected to Claims 26-28, 30, 39-41, and 43 as being dependent upon a rejected base claim, but indicated that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 23 has been amended to include the limitations of Claims 24, 25 and 26. Claim 30 rewritten in independent form including the limitations of original Claim 23 and original Claim 29. Claim 36 has been amended to include the limitations of original Claims 37, 38, and 39. Claim 43 has been amended be in independent form including the limitations of original Claim 36 and original Claim 42. Thus, the scope of Claims 26-28, 30, 39-41, and 43 has not been narrowed.

Claim 20 has been amended to include the limitation "locating the primary region" and Claim 33 has been amended to include the limitation "means for locating the primary region". These amendments are supported by at least the original Claims which recites "a primary region representing a circular main fiducial" and Fig. 1 which includes "Locate Fiducials 120" and the specification at paragraphs [0055] to [0065] which describe a method locating fiducials in accordance with one embodiment of the present invention..

Claims 27, 28, 40 and 41 are amended to properly depend on claims based on the amendments of the claims described above.

No new matter has been added in the claims.

Claim Rejections – 35 U.S.C. §102

Claims 20-23, 31-36, 44, and 45 were rejected under 35 U.S.C. §102(e) as being anticipated by Kosaka (US Pat. No. 6,724,930).

However as described above the Examiner objected to Claims 26-28, 30, 39-41, and 43 as being dependent upon a rejected base claim, but indicated that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 23 has been amended to include the limitations of Claims 24, 25 and 26. Claim 30 rewritten in independent form including the limitations of original Claim 23 and original Claim 29. Claim 36 has been amended to include the limitations of original

Claims 37, 38, and 39. Claim 43 has been amended be in independent form including the limitations of original Claim 36 and original Claim 42. Thus, Applicant respectfully submit that independent Claims 23, 30, 36, and 42 are allowable. Furthermore Applicant respectfully submits that Claims 27, 28, 31 and 32 which depend from Claim 23; and Claims 40, 41, 44, and 45, which depend from Claim 36 are likewise allowable.

Claim 20 is amended to include the limitation “locating the primary region” to further distinguish Claim 20 from the teachings of Kosaka. Specifically, Applicants respectfully submit that the teaching of Kosaka are fundamentally different from Claim 20. Specifically, Kosaka teaches a “method for estimating the position and orientation of an object when at least four code markers can be identified.” and “a case where at least three code markers can be identified”.(Kosaka Col. 5, lines 17-22). The portions of Kosaka cited by the Examiner are geared towards locating the “code markers” rather than for determining the 5-D or 6-D pose. For example with regards to the limitation “characterizing the primary region as an ellipse based on the moments of the primary region” the Examiner stated to “see col. 8 lines 29-31- candidate marker regions are tested whether it is an marker region based on a threshold”. Furthermore, Kosaka summarizes the procedure described in Col. 7 and 8 by saying “For the marker region identified in this manner, a centroid of the center pattern within the image is registered as the position of the code marker”. (Kosaka, Col. 9, lines 5-8). However, in amended Claim 20, the location of primary region is determined in “locating the primary region” and thus the limitation “characterizing the primary region as an ellipse based on the moments of the primary region” and “calculating a plurality of parameters for a 5D pose based on the ellipse” is not related to locating the primary region.

Furthermore Claim 20 recites “calculating a plurality of parameters for a 5D pose based on the ellipse”. With regards to this limitation the Examiner stated referred Kosaka Col. 11 lines 5-39. However Kosaka’s method uses multiple markers to create a 5D pose rather than being based on an ellipse that was created by “characterizing the primary region as an ellipse based on moments of the primary region” as recited by Claim 20. Accordingly Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 20. Furthermore, Applicants respectfully submit that Claims 21 and 22 which depends from Claim 20 are also allowable.

Similarly, Applicant respectfully submit that Claims 33-36 which are means plus function claims based on Claims 21-23 are also allowable.

Claim Rejections – 35 U.S.C. §103

Claims 24, 25, 29, 37, 38, and 42 were rejected under 35 U.S.C. §103. However Applicant respectfully submits that these rejections have been rendered moot by the amendments of the claims described above. Thus, Applicant respectfully request reconsideration and withdrawal of these rejections.

CONCLUSION

Claims 20-45 were pending of which Claims 20-25, 29, 31-38, 42, and 44-45 were rejected and Claims 26-28, 30, 39-41, and 43 were objected to. Claims 24-26, 29, 37-39 and 42 are cancelled by this amendment. Claim 20, 23, 27, 28, 30, 33, 36, 40, 41, and 43, are amended. For the reasons given above Applicants respectfully request allowance of the Claims. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 857-0559.

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:
Commissioner for Patents, P. O. Box 1450,
Alexandria, VA 22313-1450 on the date shown below:

Edward Mao

Attorney for Applicant(s)

7/9/2007

Date of Signature

Respectfully submitted,

Edward Mao

Edward S. Mao
Attorney for Applicant(s)
Reg. No. 40,633

SILICON VALLEY
PATENT GROUP LLP

18805 Cox Avenue,
Suite 220
San Jose, CA 95070
(408) 378-7777
FAX (408) 982-8210